BOARD OF STUDIES
NEW SOUTH WALES

2011
HIGHER SCHOOL CERTIFICATE EXAMINATION

Information Technology

General Instructions
- Reading time – 5 minutes
- Working time – 2 hours
- Write using black or blue pen
  Black pen is preferred
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of pages 9, 11, 13 and 15

Total marks – 80

(**Section I**) Pages 2–6

15 marks
- Attempt Questions 1–15
- Allow about 20 minutes for this section

(**Section II**) Pages 9–16

35 marks
- Attempt Questions 16–19
- Allow about 50 minutes for this section

(**Section III**) Page 17

15 marks
- Attempt Question 20
- Allow about 25 minutes for this section

(**Section IV**) Page 18

15 marks
- Attempt Question 21
- Allow about 25 minutes for this section

Section I

15 marks
Attempt Questions 1–15
Allow about 20 minutes for this section

Use the multiple-choice answer sheet for Questions 1–15.

1   Which type of software package would be most appropriate for producing a high quality colour brochure?

(A)   Text editing

(B)   Web authoring

(C)   Image capturing

(D)   Desktop publishing

2   The help desk activities of a local organisation are now being provided by an overseas company.
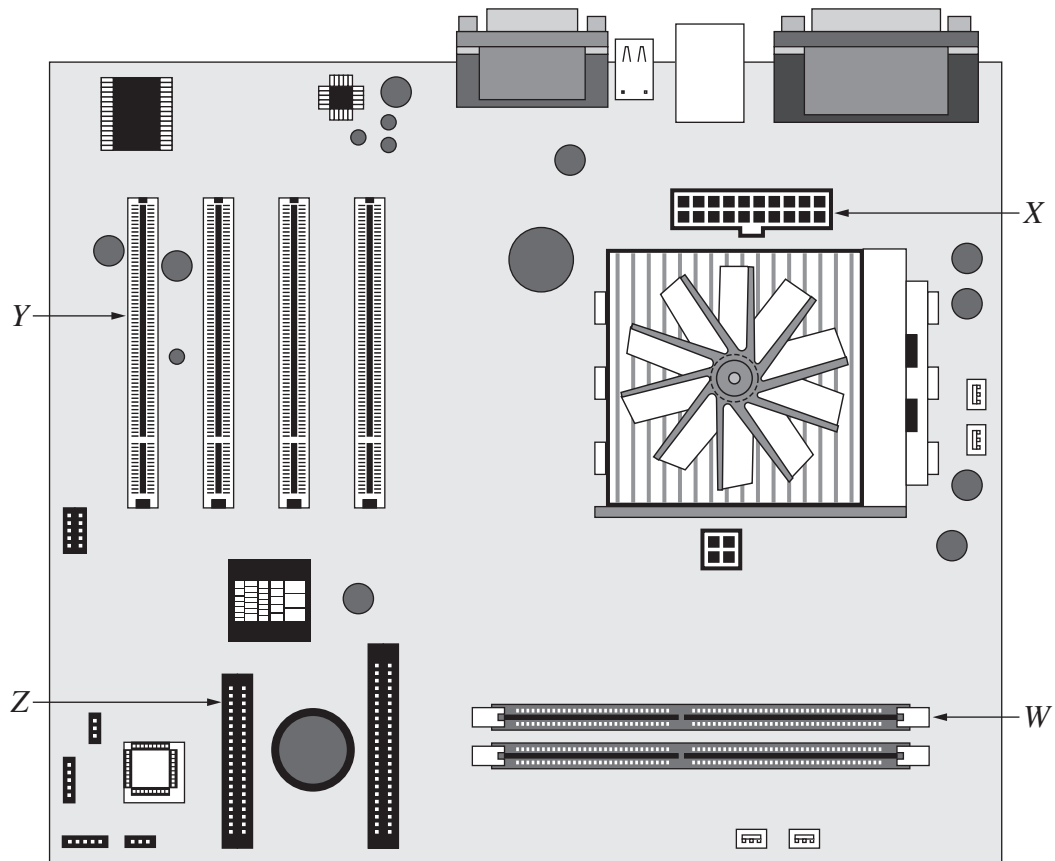
What is this an example of?

(A)   Leasing

(B)   Outsourcing

(C)   The use of an internal client

(D)   The use of an external client

3   Which of the following is responsible for the legal enforcement of Occupational Health and Safety (OHS) standards?

(A)   Unions

(B)   Local council

(C)   WorkCover NSW

(D)   Professional associations

Use the diagram of the motherboard shown to answer Questions 4–5.

4   At which position would the RAM be located?

   (A)   *W*

   (B)   *X*

   (C)   *Y*

   (D)   *Z*

5   What technique should be used to remove a buildup of dust from the components shown in the diagram?

   (A)   Shake the computer

   (B)   Apply a glass cleaning spray

   (C)   Wipe with a damp cloth and mild detergent

   (D)   Spray compressed air and use an anti-static brush

6 Which document outlines the core values, philosophy and customer focus of a company?

(A) Code of conduct

(B) Mission statement

(C) Organisational chart

(D) Company objective statement

7 The symbol shown normally appears with a yellow background.

What is indicated by this symbol?

(A) First aid

(B) Keep dry

(C) Hazard or warning

(D) Request for assistance

8 A computer system has been set up to save files as soon as they are edited.

Which system would best carry out this function?

(A) Dual

(B) Batch

(C) Real-time

(D) Multi-user

9 What is the purpose of testing and tagging electrical equipment?

(A) To confirm the age of the equipment

(B) To check that the equipment is safe to use

(C) To calculate how many times the equipment has been used

(D) To check that the correct type of cable is attached to the equipment

10 A client has requested the list of users who have accessed a confidential file.

Which of the following would contain the required information?

(A) Audit trail

(B) Hacking log

(C) Version control

(D) File permissions

11 Which item would an inexperienced operator refer to when loading envelopes into a new printer?

(A) Style guide

(B) User manual

(C) Keyboard overlay

(D) Technical reference

12 What is the function of a macro?

(A) To automate tasks using a recorded script

(B) To outline an organisation's formatting guidelines

(C) To guide the user through a process using a set of steps

(D) To provide a master document for creating other documents

13 Jo installed the latest version of an operating system with a single-user licence on her home computer. A friend borrowed this operating system software and installed it on another computer.

The friend's action is a violation of what?

(A) Privacy

(B) User authorisation

(C) Custom installation

(D) The end-user licence agreement

14 Which type of virus or destructive software could appear to be useful, but will actually cause damage once installed or run by a user?

(A) Hoax

(B) Worm

(C) Trojan

(D) System Sector

15 A closed-question survey has been developed to obtain feedback from 3000 customers whose details are in a company database.

What would be the most efficient method of conducting the survey?

(A) Emails

(B) Interviews

(C) Memoranda

(D) Group meetings

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Centre Number

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Section II

35 marks
Attempt Questions 16–19
Allow about 50 minutes for this section

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

Question 16 (6 marks)

(a)   (i)   Define the term *operating system*.   **1**

....

....

(ii)   Name an open-source operating system.   **1**

....

(b)   Compare open-source operating system software with commercial operating system software in terms of the following features.

(i)   Purchase price...   **2**

....

....

(ii)   Licensing agreements **2**

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Section II (continued)

Question 17 (10 marks)

(a) Complete the table below, describing the function of each computer component listed.

4

Component	Function
Motherboard	
CMOS battery	
RAM	
CPU	

(b) During normal use of a computer, a user notices that the screen suddenly develops unusual colours and the text becomes unreadable. No settings have been changed on the computer or the monitor.

  (i) Describe the process that the user could follow to eliminate the monitor and its associated cabling, as the possible cause of the problem.

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Question 17 (continued)

(ii) It was determined that a faulty PCI graphics card was causing the problem.

4

Write a procedure for the safe removal of the PCI graphics card.

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End of Question 17

Information Technology

Section II (continued)

Question 18 (9 marks)

A small business has recently extended its computer network to include the following components:

- Modem
- Wireless access point
- Scanner.

(a)   Describe ONE function of each of these components.

    (i)   Modem **1**

    ....

    (ii)   Wireless access point **1**

    ....

    (iii)   Scanner **1**

    ....

(b)   The business would like to hire a new help desk operator and network administrator. Outline TWO duties that each of these employees would be required to carry out.

    (i)   Help desk operator...   **2**

    ....

    ....

    ....

    (ii)   Network administrator **2**

    ....

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– 13 –

3263

Question 18 (continued)

(c)   Name ONE diagnostic tool, other than a virus scanner, that would be used as part of a regular maintenance schedule, and describe its purpose.

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End of Question 18

Centre Number

Section II (continued)

Student Number

Question 19 (10 marks)

(a) Outline a task that would be carried out using each of the following interfaces.

    (i) Graphical user interface.. **1**

    ....

    (ii) Command line interface **1**

    ....

(b) What are the advantages of the following processes for a computer operating system?

    (i) Upgrade **2**

    ....

    ....

    ....

    (ii) Optimise.. **2**

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Question 19 (continued)

(c)   Using examples, describe the benefits of replacing a generic driver with a driver   **4**
      supplied by the vendor.

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End of Question 19

Information Technology

Section III

15 marks
Attempt Question 20
Allow about 25 minutes for this section

Answer the question in a writing booklet. Extra writing booklets are available.

In your answer you will be assessed on how well you:

■ demonstrate knowledge and understanding relevant to the question

■ communicate ideas and information using relevant workplace examples and industry terminology

■ present a logical and cohesive response

Question 20 (15 marks)

A company wishes to update its current paper-based user documentation to online documentation.

Provide advice to the management regarding the benefits to the company of online documentation.

In your answer, you should consider the following:

• The characteristics of effective online documentation

• The importance of reviewing and signing off when changes are made to online user documentation

• The importance of obtaining feedback from users regarding the effectiveness of online documentation.

Please turn over

Section IV

15 marks
Attempt Question 21
Allow about 25 minutes for this section

Answer the question in a SEPARATE writing booklet. Extra writing booklets are available.

Question 21 (15 marks)

You are preparing material for new staff regarding OHS standards in an IT workplace.

(a) Define a *hazard* and give an example from the IT environment. **2**

(b) Using examples, explain why the work environment and ergonomic factors are important considerations in the workplace. **5**

(c) Knowingly using unsafe equipment, bullying and lack of training are all examples of human factors that contribute to injury in the workplace. **8**

Explain the role of the employer, employee and WorkCover in minimising these factors.

End of paper